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Motta et al.

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(54) **LIGHT FIELD CAPTURE**

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CPC ***H04N 7/142*** (2013.01); ***G06F 3/012*** (2013.01); ***G06F 3/013*** (2013.01); ***H04N 5/247*** (2013.01); ***H04N 7/147*** (2013.01); ***H04N 7/15*** (2013.01); ***H04N 13/0007*** (2013.01)

(58) **Field of Classification Search**
None
See application file for complete search history.

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(57) **ABSTRACT**

This disclosure pertains to operations, systems, and computer readable media to capture images of a scene using a camera array and process the captured images based on a viewer's point of view (POV) for immersive augmented reality, live display wall, head mounted display, video conferencing, and similar applications. In one implementation, the disclosed subject matter provides a complete view to a viewer by combining images captured by a camera array. In another implementation, the disclosed subject matter tracks the viewer's POV as he moves from one location to another and displays images in accordance with his varying POV. The change of the viewer's POV is inclusive of movements in the X, Y, and Z dimensions.

20 Claims, 16 Drawing Sheets